

1. (Amended) A conjugate consisting essentially of a single [one or more] antibody fragment[s], wherein the antibody fragment is covalently attached to a single polyethylene glycol (PEG) [one or more nonproteinaceous polymer] molecule[s], wherein the antibody fragment is a Fab' comprising (1) a first chain that is either a light chain or a heavy chain and (2) a first opposite chain that is either a heavy chain opposite the first light chain or a light chain opposite the first heavy chain, wherein the PEG molecule is covalently attached to a first cysteine residue in the first chain that would ordinarily form a disulfide bridge with a second cysteine residue in the first opposite chain, wherein the disulfide bridge is avoided by the substitution of another amino acid residue for the second cysteine residue in the first opposite chain, wherein the apparent size of the conjugate is at least about 500 kD.

5. (Amended) The conjugate of claim 1, wherein the apparent size of the conjugate is at least about 8 fold greater than the apparent size of the [at least one] antibody fragment.

6. (Amended) The conjugate of claim 5, wherein the apparent size of the conjugate is at least about 15 fold greater than the apparent size of the [at least one] antibody fragment.

7. (Amended) The conjugate of claim 6, wherein the apparent size of the conjugate is at least about 25 fold greater than the apparent size of the [at least one] antibody fragment.

19. (Amended) The conjugate of claim 1 [18] wherein the PEG has an average molecular weight of at least about 20 kD.

26. (Amended) The conjugate of claim 1 wherein the [at least one] antibody fragment comprises an antigen binding site that binds to human interleukin-8 (IL-8).

27. (Amended) The conjugate of claim 26, wherein the PEG has [conjugate contains no more than one antibody fragment, wherein the antibody fragment is selected from the group consisting of Fab, Fab', and Fab'-SH, wherein the antibody fragment is covalently attached to no more than one nonproteinaceous polymer molecule, and wherein the nonproteinaceous polymer molecule is a polyethylene glycol having] an average molecular weight of at least about 30 kD.